

SEQUENCE LISTING

<110> MOHAMMADI, MOOSA
 SCHLESSINGER, JOSEPH
 HUBBARD, STEVAN R.

<120> CRYSTALS OF THE TYROSINE KINASE DOMAIN OF NON-INSULIN
 RECEPTOR TYROSINE KINASES

<130> 038602/0847

<140> 09/664,526

<141> 2000-09-18

<150> 09/188,809

<151> 1998-11-09

<150> 08/701,191

<151> 1996-08-21

<160> 41

<170> PatentIn Ver. 2.1

<210> 1

<211> 310

<212> PRT

<213> Homo sapiens

<400> 1

Met Leu Ala Gly Val Ser Glu Tyr Glu Leu Pro Glu Asp Pro Arg Trp
 1 5 10 15

Glu Leu Pro Arg Asp Arg Leu Val Leu Gly Lys Pro Leu Gly Glu Gly
 20 25 30

Cys Phe Gly Gln Val Val Leu Ala Glu Ala Ile Gly Leu Asp Lys Asp
 35 40 45

Lys Pro Asn Arg Val Thr Lys Val Ala Val Lys Met Leu Lys Ser Asp
 50 55 60

Ala Thr Glu Lys Asp Leu Ser Asp Leu Ile Ser Glu Met Glu Met Met
 65 70 75 80

Lys Met Ile Gly Lys His Lys Asn Ile Ile Asn Leu Leu Gly Ala Cys
 85 90 95

Thr Gln Asp Gly Pro Leu Tyr Val Ile Val Glu Tyr Ala Ser Lys Gly
 100 105 110

Asn Leu Arg Glu Tyr Leu Gln Ala Arg Arg Pro Pro Gly Leu Glu Tyr
 115 120 125

Cys Tyr Asn Pro Ser His Asn Pro Glu Glu Gln Leu Ser Ser Lys Asp
 130 135 140

Leu Val Ser Cys Ala Tyr Gln Val Ala Arg Gly Met Glu Tyr Leu Ala
 145 150 155 160
 Ser Lys Lys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu Val
 165 170 175
 Thr Glu Asp Asn Val Met Lys Ile Ala Asp Phe Gly Leu Ala Arg Asp
 180 185 190
 Ile His His Ile Asp Tyr Tyr Lys Lys Thr Thr Asn Gly Arg Leu Pro
 195 200 205
 Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp Arg Ile Tyr Thr His
 210 215 220
 Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe Thr
 225 230 235 240
 Leu Gly Gly Ser Pro Tyr Pro Gly Val Pro Val Glu Glu Leu Phe Lys
 245 250 255
 Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro Ser Asn Cys Thr Asn
 260 265 270
 Glu Leu Tyr Met Met Met Arg Asp Cys Trp His Ala Val Pro Ser Gln
 275 280 285
 Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu Asp Arg Ile Val Ala
 290 295 300
 Leu Thr Ser Asn Gln Glu
 305 310

<210> 2
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 2
 Ser Ala Ala Gly Thr Met Val Ala Gly Val Ser Glu Tyr Glu Leu Pro
 1 5 10 15
 Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu Val Leu Gly Lys
 20 25 30
 Pro Leu Gly Glu Gly Ala Phe Gly Gln Val Val Leu Ala Glu Ala Ile
 35 40 45
 Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys Val Ala Val Lys
 50 55 60
 Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser Asp Leu Ile Ser
 65 70 75 80
 Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys Asn Ile Ile Asn
 85 90 95

Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr Val Ile Val Glu
 100 105 110
 Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln Ala Arg Arg Pro
 115 120 125
 Pro Gly Leu Glu Tyr Ser Tyr Asn Pro Ser His Asn Pro Glu Glu Gln
 130 135 140
 Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln Val Ala Arg Gly
 145 150 155 160
 Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg Asp Leu Ala Ala
 165 170 175
 Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys Ile Ala Asp Phe
 180 185 190
 Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr Lys Lys Thr Thr
 195 200 205
 Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp
 210 215 220
 Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu
 225 230 235 240
 Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro Gly Val Pro Val
 245 250 255
 Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro
 260 265 270
 Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg Asp Cys Trp His
 275 280 285
 Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu
 290 295 300
 Asp Arg Ile Val Ala Leu Thr Ser Asn Gln Glu
 305 310 315

<210> 3

<211> 351

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
protein encoded by recombinant baculovirus

<400> 3

Met Arg Gly Ser His His His His His His Gly Met Ala Ser Met Thr
 1 5 10 15
 Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Asp Lys Asp
 20 25 30

Pro Ser Ser Arg Ser Ala Ala Gly Thr Met Val Ala Gly Val Ser Glu
 35 40 45
 Tyr Glu Leu Pro Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu
 50 55 60
 Val Leu Gly Lys Pro Leu Gly Glu Gly Ala Phe Gly Gln Val Val Leu
 65 70 75 80
 Ala Glu Ala Ile Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys
 85 90 95
 Val Ala Val Lys Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser
 100 105 110
 Asp Leu Ile Ser Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys
 115 120 125
 Asn Ile Ile Asn Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr
 130 135 140
 Val Ile Val Glu Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln
 145 150 155 160
 Ala Arg Arg Pro Pro Gly Leu Glu Tyr Ser Tyr Asn Pro Ser His Asn
 165 170 175
 Pro Glu Glu Gln Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln
 180 185 190
 Val Ala Arg Gly Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg
 195 200 205
 Asp Leu Ala Ala Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys
 210 215 220
 Ile Ala Asp Phe Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr
 225 230 235 240
 Lys Lys Thr Thr Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu
 245 250 255
 Ala Leu Phe Asp Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe
 260 265 270
 Gly Val Leu Leu Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro
 275 280 285
 Gly Val Pro Val Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg
 290 295 300
 Met Asp Lys Pro Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg
 305 310 315 320
 Asp Cys Trp His Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu
 325 330 335

Val Glu Asp Leu Asp Arg Ile Val Ala Leu Thr Ser Asn Gln Glu
 340 345 350

<210> 4
 <211> 933
 <212> DNA
 <213> Homo sapiens

<400> 4
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 gacagactgg tcttaggcaa acccctggga gagggctgct ttgggcaggt ggtgttggca 120
 gaggctatcg ggctggacaa ggacaaaccc aaccgtgtga ccaaagtggc tgtgaagatg 180
 ttgaagtcgg acgcaacaga gaaagacttg tcagacctga tctcagaaat ggagatgatg 240
 aagatgatcg ggaagcataa gaatatcatc aacctgctgg gggcctgcac gcaggatggg 300
 cccttgtatg tcatcgtgga gtatgcctcc aagggcaacc tgcgggagta cctgcaggcc 360
 cggaggcccc cagggtctgga atactgctac aaccccagcc acaaccaga ggagcagctc 420
 tcctccaagg acctggtgtc ctgcgcctac cagggtggccc gaggcattga gtatctggcc 480
 tccaagaagt gcataacccg agacctggga gccaggaatg tcctggtgac agaggacaat 540
 gtgatgaaga tagcagactt tggcctcgca cgggacattc accacatcga ctactataaa 600
 aagacaacca acggccgact gcctgtgaag tggatggcac ccgaggcatt atttgaccgg 660
 atctacaccc accagagtga tgtgtggtct ttcggggtgc tcctgtggga gatcttcaact 720
 ctgggctggc ccccataccc cgggtgtgct gtggagggaac ttttcaagct gctgaaggag 780
 ggtcaccgca tggacaagcc cagtaactgc accaacgagc tgtacatgat gatgctgggac 840
 tgctggcatg cagtgcctc acagagaccc accttcaagc agctggtgga agacctggac 900
 cgcacgtggt ccttgacctc caaccaggag tag 933

<210> 5
 <211> 1056
 <212> DNA
 <213> Homo sapiens

<400> 5
 atgcgggggt ctcacatcatc tcacatcatc ggtatggcta gcatgactgg tggacagcaa 60
 atgggtcggg atctgtacga cgatgacgat aaggatccga gctcgagatc tgcagctggg 120
 accatggtag cagggggtctc tgagtatgag ctccccgaag accctcgctg ggagctgect 180
 cgggacagac tgggtcttagg caaaccctcg ggagagggcg cctttgggca ggtggtgttg 240
 gcagaggcta tcgggctgga caaggacaaa cccaaccgtg tgaccaaagt ggctgtgaag 300
 atgttgaagt cggacgcaac agagaaagac ttgtcagacc tgatctcaga aatggagatg 360
 atgaagatga tcgggaagca taagaatatc atcaacctgc tgggggcctg cacgcaggat 420
 ggtcccttgt atgtcatcgt ggagtatgcc tccaagggca acctgcggga gtacctgcag 480
 gcccggaggc cccaggggtt ggaatactcc tacaaccca gccacaacc agaggagcag 540
 ctctcctcca aggacctggt gtctgcgcc taccagggtg cccgaggcat ggagtatctg 600
 gcctccaaga agtgcataca ccgagacctg gcagccagga atgtcctggt gacagaggac 660
 aatgtgatga agatagcaga ctttggcctc gcacgggaca ttcaccacat cgactactat 720
 aaaaagacaa ccaacggccg actgcctgtg aagtggatgg caccgaggc attatttgac 780
 cggatctaca cccaccagag tgatgtgtgg tctttcgggg tgctcctgtg ggagatcttc 840
 actctgggcg gctccccata ccccggtgtg cctgtggagg aacttttcaa gctgctgaag 900
 gagggtcacc gcatggacaa gccagtaac tgcaccaacg agctgtacat gatgatgcgg 960
 gactgctggc atgcagtgcc ctacacagaga cccaccttca agcagctggt ggaagacctg 1020
 gaccgcatcg tggccttgac ctccaaccag gagttag 1056

<210> 6
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 6

Met	Leu	Ala	Gly	Val	Ser	Glu	Tyr	Glu	Leu	Pro	Glu	Asp	Pro	Arg	Trp
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Glu	Leu	Pro	Arg	Asp	Arg	Leu	Val	Leu	Gly	Lys	Pro	Leu	Gly	Glu	Gly
			20					25					30		
Cys	Phe	Gly	Gln	Val	Val	Leu	Ala	Glu	Ala	Ile	Gly	Leu	Asp	Lys	Asp
		35					40					45			
Lys	Pro	Asn	Arg	Val	Thr	Lys	Val	Ala	Val	Lys	Met	Leu	Lys	Ser	Asp
	50					55					60				
Ala	Thr	Glu	Lys	Asp	Leu	Ser	Asp	Leu	Ile	Ser	Glu	Met	Glu	Met	Met
65					70					75					80
Lys	Met	Ile	Gly	Lys	His	Lys	Asn	Ile	Ile	Asn	Leu	Leu	Gly	Ala	Cys
				85					90					95	
Thr	Gln	Asp	Gly	Pro	Leu	Tyr	Val	Ile	Val	Glu	Tyr	Ala	Ser	Lys	Gly
			100					105					110		
Asn	Leu	Arg	Glu	Tyr	Leu	Gln	Ala	Arg	Arg	Pro	Pro	Gly	Leu	Glu	Tyr
		115					120					125			
Cys	Tyr	Asn	Pro	Ser	His	Asn	Pro	Glu	Glu	Gln	Leu	Ser	Ser	Lys	Asp
	130					135					140				
Leu	Val	Ser	Cys	Ala	Tyr	Gln	Val	Ala	Arg	Gly	Met	Glu	Tyr	Leu	Ala
145					150					155					160
Ser	Lys	Lys	Cys	Ile	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Val	Leu	Val
				165					170					175	
Thr	Glu	Asp	Asn	Val	Met	Lys	Ile	Ala	Asp	Phe	Gly	Leu	Ala	Arg	Asp
			180					185					190		
Ile	His	His	Ile	Asp	Tyr	Tyr	Lys	Lys	Thr	Thr	Asn	Gly	Arg	Leu	Pro
	195						200					205			
Val	Lys	Trp	Met	Ala	Pro	Glu	Ala	Leu	Phe	Asp	Arg	Ile	Tyr	Thr	His
	210					215					220				
Gln	Ser	Asp	Val	Trp	Ser	Phe	Gly	Val	Leu	Leu	Trp	Glu	Ile	Phe	Thr
225					230					235					240
Leu	Gly	Gly	Ser	Pro	Tyr	Pro	Gly	Val	Pro	Val	Glu	Glu	Leu	Phe	Lys
				245					250					255	
Leu	Leu	Lys	Glu	Gly	His	Arg	Met	Asp	Lys	Pro	Ser	Asn	Cys	Thr	Asn
			260					265					270		
Glu	Leu	Tyr	Met	Met	Met	Arg	Asp	Cys	Trp	His	Ala	Val	Pro	Ser	Gln
		275					280					285			
Arg	Pro	Thr	Phe	Lys	Gln	Leu	Val	Glu	Asp	Leu	Asp	Arg	Ile	Val	Ala
		290				295					300				

Leu Thr Ser Asn Gln Glu
305 310

<210> 7
<211> 310
<212> PRT
<213> Homo sapiens

<400> 7

Met Leu Ala Gly Val Ser Glu Tyr Glu Leu Pro Glu Asp Pro Lys Trp
1 5 10 15

Glu Phe Pro Arg Asp Lys Leu Thr Leu Gly Lys Pro Leu Gly Glu Gly
20 25 30

Cys Phe Gly Gln Val Val Met Ala Glu Ala Val Gly Ile Asp Lys Asp
35 40 45

Lys Pro Lys Glu Ala Val Thr Val Ala Val Lys Met Leu Lys Asp Asp
50 55 60

Ala Thr Glu Lys Asp Leu Ser Asp Leu Val Ser Glu Met Glu Met Met
65 70 75 80

Lys Met Ile Gly Lys His Lys Asn Ile Ile Asn Leu Leu Gly Ala Cys
85 90 95

Thr Gln Asp Gly Pro Leu Tyr Val Ile Val Glu Tyr Ala Ser Lys Gly
100 105 110

Asn Leu Arg Glu Tyr Leu Arg Ala Arg Arg Pro Pro Gly Met Glu Tyr
115 120 125

Ser Tyr Asp Ile Asn Arg Val Pro Glu Glu Gln Met Thr Phe Lys Asp
130 135 140

Leu Val Ser Cys Thr Tyr Gln Leu Ala Arg Gly Met Glu Tyr Leu Ala
145 150 155 160

Ser Gln Lys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu Val
165 170 175

Thr Glu Asn Asn Val Met Lys Ile Ala Asp Phe Gly Leu Ala Arg Asp
180 185 190

Ile Asn Asn Ile Asp Tyr Tyr Lys Lys Thr Thr Asn Gly Arg Leu Pro
195 200 205

Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp Arg Val Tyr Thr His
210 215 220

Gln Ser Asp Val Trp Ser Phe Gly Val Leu Met Trp Glu Ile Phe Thr
225 230 235 240

Leu Gly Gly Ser Pro Tyr Pro Gly Ile Pro Val Glu Glu Leu Phe Lys
245 250 255

Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro Ala Asn Cys Thr Asn
260 265 270

Glu Leu Tyr Met Met Met Arg Asp Cys Trp His Ala Val Pro Ser Gln
275 280 285

Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu Asp Arg Ile Val Ala
290 295 300

Leu Thr Ser Asn Gln Glu
305 310

<210> 8

<211> 310

<212> PRT

<213> Homo sapiens

<400> 8

Met Leu Ala Asn Val Ser Glu Leu Glu Leu Pro Ala Asp Pro Lys Trp
1 5 10 15

Glu Leu Ser Arg Ala Arg Leu Thr Leu Gly Lys Pro Leu Gly Glu Gly
20 25 30

Cys Phe Gly Gln Val Val Met Ala Glu Ala Ile Gly Ile Asp Lys Asp
35 40 45

Arg Ala Ala Lys Pro Val Thr Val Ala Val Lys Met Leu Lys Asp Asp
50 55 60

Ala Thr Asp Lys Asp Leu Ser Asp Leu Val Ser Glu Met Glu Met Met
65 70 75 80

Lys Met Ile Gly Lys His Lys Asn Ile Ile Asn Leu Leu Gly Ala Cys
85 90 95

Thr Gln Gly Gly Pro Leu Tyr Val Leu Val Glu Tyr Ala Ala Lys Gly
100 105 110

Asn Leu Arg Glu Phe Leu Arg Ala Arg Arg Pro Pro Gly Leu Asp Tyr
115 120 125

Ser Phe Asp Thr Cys Lys Pro Pro Glu Glu Gln Leu Thr Phe Lys Asp
130 135 140

Leu Val Ser Cys Ala Tyr Gln Val Ala Arg Gly Met Glu Tyr Leu Ala
145 150 155 160

Ser Gln Lys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu Val
165 170 175

Thr Glu Asp Asn Val Met Lys Ile Ala Asp Phe Gly Leu Ala Arg Asp
180 185 190

Val His Asn Leu Asp Tyr Tyr Lys Lys Thr Thr Asn Gly Arg Leu Pro
195 200 205

Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp Arg Val Tyr Thr His
210 215 220

Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe Thr
225 230 235 240

Leu Gly Gly Ser Pro Tyr Pro Gly Ile Pro Val Glu Glu Leu Phe Lys
245 250 255

Leu Leu Lys Glu Gly His Arg Met Asp Lys Pro Ala Asn Cys Thr His
260 265 270

Asp Leu Tyr Met Ile Met Arg Glu Cys Trp His Ala Ala Pro Ser Gln
275 280 285

Arg Pro Thr Phe Lys Gln Leu Val Glu Asp Leu Asp Arg Val Leu Thr
290 295 300

Val Thr Ser Thr Asp Glu
305 310

<210> 9

<211> 309

<212> PRT

<213> Homo sapiens

<400> 9

Leu Leu Ala Gly Leu Val Ser Leu Asp Leu Pro Leu Asp Pro Leu Trp
1 5 10 15

Glu Phe Pro Arg Asp Arg Leu Val Leu Gly Lys Pro Leu Gly Glu Gly
20 25 30

Cys Phe Gly Gln Val Val Arg Ala Glu Ala Phe Gly Met Asp Pro Ala
35 40 45

Arg Pro Asp Gln Ala Ser Thr Val Ala Val Lys Met Leu Lys Asp Asn
50 55 60

Ala Ser Asp Lys Asp Leu Ala Asp Leu Val Ser Glu Met Glu Val Met
65 70 75 80

Lys Leu Ile Gly Arg His Lys Asn Ile Ile Asn Leu Leu Gly Val Cys
85 90 95

Thr Gln Glu Gly Pro Leu Tyr Val Ile Val Glu Cys Ala Ala Lys Gly
100 105 110

Asn Leu Arg Glu Phe Leu Arg Ala Arg Arg Pro Pro Gly Pro Asp Leu
115 120 125

Ser Pro Asp Gly Pro Arg Ser Ser Glu Gly Pro Leu Ser Phe Pro Val
130 135 140

Leu Val Ser Cys Ala Tyr Gln Val Ala Arg Gly Met Gln Tyr Leu Glu
145 150 155 160

Ser Arg Lys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu Val
 165 170 175
 Thr Glu Asp Asn Val Met Lys Ile Ala Asp Phe Gly Leu Ala Arg Gly
 180 185 190
 Val His His Ile Asp Tyr Tyr Lys Lys Thr Ser Asn Gly Arg Leu Pro
 195 200 205
 Val Lys Trp Met Ala Pro Glu Ala Leu Phe Asp Arg Val Tyr Thr His
 210 215 220
 Gln Ser Asp Val Trp Ser Phe Gly Ile Leu Leu Trp Glu Ile Phe Thr
 225 230 235 240
 Leu Gly Gly Ser Pro Tyr Pro Gly Ile Pro Val Glu Glu Leu Phe Ser
 245 250 255
 Leu Leu Arg Glu Gly His Arg Met Asp Arg Pro Pro His Cys Pro Pro
 260 265 270
 Glu Leu Tyr Gly Leu Met Arg Glu Cys Trp His Ala Ala Pro Ser Gln
 275 280 285
 Arg Pro Thr Phe Lys Gln Leu Val Glu Ala Leu Asp Lys Val Leu Leu
 290 295 300
 Ala Val Ser Glu Glu
 305

<210> 10
 <211> 318
 <212> PRT
 <213> *Drosophila melanogaster*

<400> 10
 Pro Ala Gln Gly Phe Asn Glu Tyr Glu Phe Pro Leu Asp Ser Asn Trp
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 Glu Ile Pro Arg Gln Gln Leu Ser Leu Gly Ser Ile Leu Gly Glu Gly
 20 25 30
 Ala Phe Gly Arg Val Val Met Ala Glu Ala Glu Gly Leu Pro Arg Ser
 35 40 45
 Pro Gln Leu Ala Glu Thr Ile Val Ala Val Lys Met Val Lys Glu Glu
 50 55 60
 His Thr Asp Thr Asp Met Ala Ser Leu Val Arg Glu Met Glu Val Met
 65 70 75 80
 Lys Met Ile Gly Lys His Ile Asn Ile Ile Asn Leu Leu Gly Cys Cys
 85 90 95
 Ser Gln Gly Gly Pro Leu Trp Val Ile Val Glu Tyr Ala Pro His Gly
 100 105 110

Asn Leu Lys Asp Phe Leu Lys Gln Asn Arg Pro Gly Ala Pro Gln Arg
 115 120 125
 Arg Ser Asp Ser Asp Gly Tyr Leu Asp Asp Lys Pro Leu Ile Ser Thr
 130 135 140
 Gln His Leu Gly Glu Lys Glu Leu Thr Lys Phe Ala Phe Gln Ile Ala
 145 150 155 160
 Arg Gly Met Glu Tyr Leu Ala Ser Arg Arg Cys Ile His Arg Asp Leu
 165 170 175
 Ala Ala Arg Asn Val Leu Val Ser Asp Gly Tyr Val Met Lys Ile Ala
 180 185 190
 Asp Phe Gly Leu Ala Arg Asp Ile Gln Asp Thr Glu Tyr Tyr Arg Lys
 195 200 205
 Asn Thr Asn Gly Arg Leu Pro Ile Lys Trp Met Ala Pro Glu Ser Leu
 210 215 220
 Gln Glu Lys Lys Tyr Asp Ser Gln Ser Asp Val Trp Ser Tyr Gly Val
 225 230 235 240
 Leu Leu Trp Glu Ile Met Thr Tyr Gly Asp Gln Pro Tyr Pro His Ile
 245 250 255
 Leu Ser Ala Glu Glu Leu Tyr Ser Tyr Leu Ile Thr Gly Gln Arg Met
 260 265 270
 Glu Lys Pro Ala Lys Cys Ser Leu Asn Ile Tyr Val Val Met Arg Gln
 275 280 285
 Cys Trp His Phe Gln Ser Cys Ala Arg Pro Thr Phe Ala Glu Leu Val
 290 295 300
 Glu Ser Phe Asp Gly Ile Leu Gln Gln Ala Ser Ser Asn Pro
 305 310 315

<210> 11

<211> 322

<212> PRT

<213> *Caenorhabditis elegans*

<400> 11

Glu Asn Thr Val Leu Ser Glu Tyr Glu Val Asp Ser Asp Pro Val Trp
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 Glu Val Glu Arg Ser Lys Leu Ser Leu Val His Met Leu Gly Glu Gly
 20 25 30
 Ala Phe Gly Glu Val Trp Lys Ala Thr Tyr Lys Glu Thr Glu Asn Asn
 35 40 45
 Glu Ile Ala Val Ala Val Lys Lys Leu Lys Met Ser Ala His Glu Lys
 50 55 60

Glu Leu Ile Asp Leu Val Ser Glu Met Glu Thr Phe Lys Val Ile Gly
 65 70 75 80
 Glu His Glu Asn Val Leu Arg Leu Ile Gly Cys Cys Thr Gly Ala Gly
 85 90 95
 Pro Leu Tyr Val Val Val Glu Leu Cys Lys His Gly Asn Leu Arg Asp
 100 105 110
 Phe Leu Arg Ala His Arg Pro Lys Glu Glu Lys Ala Lys Lys Ser Ser
 115 120 125
 Gln Glu Leu Thr Asp Tyr Leu Glu Pro Arg Lys Ala Ser Asp Lys Asp
 130 135 140
 Asp Ile Glu Leu Ile Pro Asn Leu Thr Gln Arg His Leu Val Gln Phe
 145 150 155 160
 Ala Trp Gln Val Ala Gln Gly Met Asn Phe Leu Ala Ser Lys Lys Ile
 165 170 175
 Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu Val Gly Asp Gly His
 180 185 190
 Val Leu Lys Ile Ser Asp Phe Gly Leu Ser Arg Asp Val His Cys Asn
 195 200 205
 Asp Tyr Tyr Arg Lys Arg Gly Asn Gly Arg Leu Pro Ile Lys Trp Met
 210 215 220
 Ala Leu Glu Ala Leu Asp Ser Asn Val Tyr Thr Val Glu Ser Asp Val
 225 230 235 240
 Trp Ser Tyr Gly Val Leu Leu Trp Glu Ile Met Thr Leu Gly Gly Thr
 245 250 255
 Pro Tyr Pro Thr Ile Ala Met Pro Glu Leu Tyr Ala Asn Leu Lys Glu
 260 265 270
 Gly Tyr Arg Met Glu Pro Pro His Leu Cys Pro Gln Glu Val Tyr His
 275 280 285
 Leu Met Cys Ser Cys Trp Arg Glu Lys Leu Glu Glu Arg Pro Ser Phe
 290 295 300
 Lys Thr Ile Val Asp Tyr Leu Asp Trp Met Leu Thr Met Thr Asn Glu
 305 310 315 320
 Thr Ile

<210> 12

<211> 306

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Insulin receptor
tyrosine kinase

<400> 12

Val Phe Pro Cys Ser Val Tyr Val Pro Asp Glu Trp Glu Val Ser Arg
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Glu Lys Ile Thr Leu Leu Arg Glu Leu Gly Gln Gly Ser Phe Gly Met
20 25 30

Val Tyr Glu Gly Asn Ala Arg Asp Ile Ile Lys Gly Glu Ala Glu Thr
35 40 45

Arg Val Ala Val Lys Thr Val Asn Glu Ser Ala Ser Leu Arg Glu Arg
50 55 60

Ile Glu Phe Leu Asn Glu Ala Ser Val Met Lys Gly Phe Thr Cys His
65 70 75 80

His Val Val Arg Leu Leu Gly Val Val Ser Lys Gly Gln Pro Thr Leu
85 90 95

Val Val Met Glu Leu Met Ala His Gly Asp Leu Lys Ser Tyr Leu Arg
100 105 110

Ser Leu Arg Pro Glu Ala Glu Asn Asn Pro Gly Arg Pro Pro Pro Thr
115 120 125

Leu Gln Glu Met Ile Gln Met Ala Ala Glu Ile Ala Asp Gly Met Ala
130 135 140

Tyr Leu Asn Ala Lys Lys Phe Val His Arg Asp Leu Ala Ala Arg Asn
145 150 155 160

Cys Met Val Ala His Asp Phe Thr Val Lys Ile Gly Asp Phe Gly Met
165 170 175

Thr Arg Asp Ile Tyr Glu Thr Asp Tyr Tyr Arg Lys Gly Gly Lys Gly
180 185 190

Leu Leu Pro Val Arg Trp Met Ala Pro Glu Ser Leu Lys Asp Gly Val
195 200 205

Phe Thr Thr Ser Ser Asp Met Trp Ser Phe Gly Val Val Leu Trp Glu
210 215 220

Ile Thr Ser Leu Ala Glu Gln Pro Tyr Gln Gly Leu Ser Asn Glu Gln
225 230 235 240

Val Leu Lys Phe Val Met Asp Gly Gly Tyr Leu Asp Gln Pro Asp Asn
245 250 255

Cys Pro Glu Arg Val Thr Asp Leu Met Arg Met Cys Trp Gln Phe Asn
260 265 270

Pro Lys Met Arg Pro Thr Phe Leu Glu Ile Val Asn Leu Leu Lys Asp
275 280 285

Asp Leu His Pro Ser Phe Pro Glu Val Ser Phe Phe His Ser Glu Glu
 290 295 300

Asn Lys
 305

<210> 13
 <211> 299
 <212> PRT
 <213> Homo sapiens

<400> 13

Leu Pro Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu Val Leu
 1 5 10 15

Gly Lys Pro Leu Gly Glu Gly Cys Phe Gly Gln Val Val Leu Ala Glu
 20 25 30

Ala Ile Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys Val Ala
 35 40 45

Val Lys Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser Asp Leu
 50 55 60

Ile Ser Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys Asn Ile
 65 70 75 80

Ile Asn Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr Val Ile
 85 90 95

Val Glu Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln Ala Arg
 100 105 110

Arg Pro Pro Gly Leu Glu Tyr Cys Tyr Asn Pro Ser His Asn Pro Glu
 115 120 125

Glu Gln Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln Val Ala
 130 135 140

Arg Gly Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg Asp Leu
 145 150 155 160

Ala Ala Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys Ile Ala
 165 170 175

Asp Phe Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr Lys Lys
 180 185 190

Thr Thr Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ala Leu
 195 200 205

Phe Asp Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe Gly Val
 210 215 220

Leu Leu Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro Gly Val
 225 230 235 240

Pro Val Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg Met Asp
245 250 255

Lys Pro Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg Asp Cys
260 265 270

Trp His Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu Val Glu
275 280 285

Asp Leu Asp Arg Ile Val Ala Leu Thr Ser Asn
290 295

<210> 14

<211> 279

<212> PRT

<213> Homo sapiens

<400> 14

Pro Asn Gln Ala Leu Leu Arg Ile Leu Lys Glu Thr Glu Phe Lys Lys
1 5 10 15

Ile Lys Val Leu Gly Ser Gly Ala Phe Gly Thr Val Tyr Lys Gly Leu
20 25 30

Trp Ile Pro Glu Gly Glu Lys Val Lys Ile Pro Val Ala Ile Lys Glu
35 40 45

Leu Arg Glu Ala Thr Ser Pro Lys Ala Asn Lys Glu Ile Leu Asp Glu
50 55 60

Ala Tyr Val Met Ala Ser Val Asp Asn Pro His Val Cys Arg Leu Leu
65 70 75 80

Gly Ile Cys Leu Thr Ser Thr Val Gln Leu Ile Thr Gln Leu Met Pro
85 90 95

Phe Gly Cys Leu Leu Asp Tyr Val Arg Glu His Lys Asp Asn Ile Gly
100 105 110

Ser Gln Tyr Leu Leu Asn Trp Cys Val Gln Ile Ala Lys Gly Met Asn
115 120 125

Tyr Leu Glu Asp Arg Arg Leu Val His Arg Asp Leu Ala Ala Arg Asn
130 135 140

Val Leu Val Lys Thr Pro Gln His Val Lys Ile Thr Asp Phe Gly Leu
145 150 155 160

Ala Lys Leu Leu Gly Ala Glu Glu Lys Glu Tyr His Ala Glu Gly Gly
165 170 175

Lys Val Pro Ile Lys Trp Met Ala Leu Glu Ser Ile Leu His Arg Ile
180 185 190

Tyr Thr His Gln Ser Asp Val Trp Ser Tyr Gly Val Thr Val Trp Glu
195 200 205

Leu Met Thr Phe Gly Ser Lys Pro Tyr Asp Gly Ile Pro Ala Ser Glu
210 215 220

Ile Ser Ser Ile Leu Glu Lys Gly Glu Arg Leu Pro Gln Pro Pro Ile
225 230 235 240

Cys Thr Ile Asp Val Tyr Met Ile Met Val Lys Cys Trp Met Ile Asp
245 250 255

Ala Asp Ser Arg Pro Lys Phe Arg Glu Leu Ile Ile Glu Phe Ser Lys
260 265 270

Met Ala Arg Asp Pro Gln Arg
275

<210> 15

<211> 290

<212> PRT

<213> Homo sapiens

<400> 15

Val Tyr Val Pro Asp Glu Trp Glu Val Ser Arg Glu Lys Ile Thr Leu
1 5 10 15

Leu Arg Glu Leu Gly Gln Gly Ser Phe Gly Met Val Tyr Glu Gly Asn
20 25 30

Ala Arg Asp Ile Ile Lys Gly Glu Ala Glu Thr Arg Val Ala Val Lys
35 40 45

Thr Val Asn Glu Ser Ala Ser Leu Arg Glu Arg Ile Glu Phe Leu Asn
50 55 60

Glu Ala Ser Val Met Lys Gly Phe Thr Cys His His Val Val Arg Leu
65 70 75 80

Leu Gly Val Val Ser Lys Gly Gln Pro Thr Leu Val Val Met Glu Leu
85 90 95

Met Ala His Gly Asp Leu Lys Ser Tyr Leu Arg Ser Leu Arg Pro Glu
100 105 110

Ala Glu Asn Asn Pro Gly Arg Pro Pro Pro Thr Leu Gln Glu Met Ile
115 120 125

Gln Met Ala Ala Glu Ile Ala Asp Gly Met Ala Tyr Leu Asn Ala Lys
130 135 140

Lys Phe Val His Arg Asp Leu Ala Ala Arg Asn Cys Met Val Ala His
145 150 155 160

Asp Phe Thr Val Lys Ile Gly Asp Phe Gly Met Thr Arg Asp Ile Tyr
165 170 175

Glu Thr Asp Tyr Tyr Arg Lys Gly Gly Lys Gly Leu Leu Pro Val Arg
180 185 190

Trp Met Ala Pro Glu Gly Leu Lys Asp Gly Val Phe Thr Thr Ser Ser
195 200 205

Asp Met Trp Ser Phe Gly Val Val Leu Trp Glu Ile Thr Ser Leu Ala
210 215 220

Glu Gln Pro Tyr Gln Gly Leu Ser Asn Glu Gln Val Leu Lys Phe Val
225 230 235 240

Met Asp Gly Gly Tyr Leu Asp Gln Pro Asp Asn Cys Pro Glu Arg Val
245 250 255

Thr Asp Leu Met Arg Met Cys Trp Gln Phe Asn Pro Lys Met Arg Pro
260 265 270

Thr Phe Leu Glu Ile Val Asn Leu Leu Lys Asp Asp Leu His Pro Ser
275 280 285

Phe Pro
290

<210> 16

<211> 293

<212> PRT

<213> Homo sapiens

<400> 16

Leu Pro Tyr Asp Ser Arg Trp Glu Phe Pro Arg Asp Gly Leu Val Leu
1 5 10 15

Gly Arg Val Leu Gly Ser Gly Ala Phe Gly Lys Val Val Glu Gly Thr
20 25 30

Ala Tyr Gly Leu Ser Arg Ser Gln Pro Val Met Lys Val Ala Val Lys
35 40 45

Met Leu Lys Pro Thr Ala Arg Ser Ser Glu Lys Gln Ala Leu Met Ser
50 55 60

Glu Leu Lys Ile Met Thr His Leu Gly Pro His Leu Asn Ile Val Asn
65 70 75 80

Leu Leu Gly Ala Cys Thr Lys Ser Gly Pro Ile Tyr Ile Ile Thr Glu
85 90 95

Tyr Cys Phe Tyr Gly Asp Leu Val Asn Tyr Leu His Lys Asn Arg Asp
100 105 110

Ser Phe Leu Ser His His Pro Glu Ser Glu Gly Leu Thr Leu Leu Asp
115 120 125

Leu Leu Ser Phe Thr Tyr Gln Val Ala Arg Gly Met Glu Phe Leu Ala
130 135 140

Ser Lys Asn Cys Val His Arg Asp Leu Ala Ala Arg Asn Val Leu Leu
145 150 155 160

Ala Gln Gly Lys Ile Val Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp
165 170 175

Ile Met His Asp Ser Asn Tyr Val Ser Lys Gly Ser Thr Phe Leu Pro
180 185 190

Val Lys Trp Met Ala Pro Glu Ser Ile Phe Asp Asn Leu Tyr Thr Thr
195 200 205

Leu Ser Asp Val Trp Ser Tyr Gly Ile Leu Leu Trp Glu Ile Phe Ser
210 215 220

Leu Gly Gly Thr Pro Tyr Pro Gly Met Met Val Asp Ser Thr Phe Tyr
225 230 235 240

Asn Lys Ile Lys Ser Gly Tyr Arg Met Ala Lys Pro Asp His Ala Thr
245 250 255

Ser Glu Val Tyr Glu Ile Met Val Lys Cys Trp Asn Ser Glu Pro Glu
260 265 270

Lys Arg Pro Ser Phe Tyr His Leu Ser Glu Ile Val Glu Asn Leu Leu
275 280 285

Pro Gly Gln Tyr Lys
290

<210> 17
<211> 294
<212> PRT
<213> Homo sapiens

<400> 17

Pro Tyr Asp Ala Ser Lys Trp Glu Phe Pro Arg Asp Arg Leu Asn Leu
1 5 10 15

Gly Lys Pro Leu Gly Arg Gly Ala Phe Gly Gln Glu Ile Glu Ala Asp
20 25 30

Ala Phe Gly Ile Asp Lys Thr Ala Thr Cys Arg Thr Val Ala Val Lys
35 40 45

Met Leu Lys Glu Gly Ala Thr His Ser Glu His Arg Ala Leu Met Ser
50 55 60

Glu Leu Lys Ile Leu Ile His Ile Gly His His Leu Asn Val Val Asn
65 70 75 80

Leu Leu Gly Ala Cys Thr Lys Pro Gly Gly Pro Leu Met Val Ile Val
85 90 95

Glu Phe Cys Lys Phe Gly Asn Leu Ser Thr Tyr Leu Arg Ser Lys Arg
100 105 110

Asn Glu Phe Val Pro Tyr Lys Thr Lys Lys Asp Phe Leu Thr Leu Glu
115 120 125

His Leu Ile Cys Tyr Ser Phe Gln Val Ala Lys Gly Met Glu Phe Leu
130 135 140

Ala Ser Arg Lys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Ile Leu
145 150 155 160

Leu Ser Glu Lys Asn Val Val Lys Ile Cys Asp Phe Gly Leu Ala Arg
165 170 175

Asp Ile Tyr Lys Asp Pro Asp Tyr Val Arg Lys Gly Asp Ala Arg Leu
180 185 190

Pro Leu Lys Trp Met Ala Pro Glu Thr Ile Phe Asp Arg Val Tyr Thr
195 200 205

Ile Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe
210 215 220

Ser Leu Gly Ala Ser Pro Tyr Pro Gly Val Lys Ile Asp Glu Glu Phe
225 230 235 240

Cys Arg Arg Leu Lys Glu Gly Thr Arg Met Arg Ala Pro Asp Tyr Thr
245 250 255

Thr Pro Glu Met Tyr Gln Thr Met Leu Asp Cys Trp His Gly Glu Pro
260 265 270

Ser Gln Arg Pro Thr Phe Ser Glu Leu Val Glu His Leu Gly Asn Leu
275 280 285

Leu Gln Ala Asn Ala Gln
290

<210> 18

<211> 288

<212> PRT

<213> Homo sapiens

<400> 18

His Ser Thr Ser Asp Lys Met His Phe Pro Arg Ser Ser Leu Gln Pro
1 5 10 15

Ile Thr Thr Leu Gly Lys Ser Glu Phe Gly Glu Val Phe Leu Ala Lys
20 25 30

Ala Gln Gly Leu Glu Glu Gly Val Ala Glu Thr Leu Val Leu Val Lys
35 40 45

Ser Leu Gln Ser Lys Asp Glu Gln Gln Gln Leu Asp Phe Arg Arg Glu
50 55 60

Leu Glu Met Phe Gly Lys Leu Asn His Ala Asn Val Val Arg Leu Leu
65 70 75 80

Gly Leu Cys Arg Glu Ala Glu Pro His Tyr Met Val Leu Glu Tyr Val
85 90 95

Asp Leu Gly Asp Leu Lys Gln Phe Leu Arg Ile Ser Lys Ser Lys Asp
 100 105 110

Glu Lys Leu Lys Ser Gln Pro Leu Ser Thr Lys Gln Lys Val Ala Leu
 115 120 125

Cys Thr Gln Val Ala Leu Gly Met Glu His Leu Ser Asn Asn Arg Phe
 130 135 140

Val His Lys Asp Leu Ala Ala Arg Asn Cys Leu Val Ser Ala Gln Arg
 145 150 155 160

Gln Val Lys Val Ser Ala Leu Gly Leu Ser Lys Asp Val Tyr Asn Ser
 165 170 175

Glu Tyr Tyr His Phe Arg Gln Ala Trp Val Pro Leu Arg Trp Met Ser
 180 185 190

Pro Glu Ala Ile Leu Glu Gly Asp Phe Ser Thr Lys Ser Asp Val Trp
 195 200 205

Ala Phe Gly Val Leu Met Trp Glu Val Phe Thr His Gly Glu Met Pro
 210 215 220

His Gly Gly Gln Ala Asp Asp Glu Val Leu Ala Asp Leu Gln Ala Gly
 225 230 235 240

Lys Ala Arg Leu Pro Gln Pro Glu Gly Cys Pro Ser Lys Leu Tyr Arg
 245 250 255

Leu Met Gln Arg Cys Trp Ala Leu Ser Pro Lys Asp Arg Pro Ser Phe
 260 265 270

Ser Glu Ile Ala Ser Ala Leu Gly Asp Ser Thr Val Asp Ser Lys Pro
 275 280 285

<210> 19

<211> 282

<212> PRT

<213> Homo sapiens

<400> 19

Ala Val Gln His Val Val Ile Gly Pro Ser Ser Leu Ile Val His Phe
 1 5 10 15

Asn Glu Val Ile Gly Arg Gly His Phe Gly Cys Val Tyr His Gly Thr
 20 25 30

Leu Leu Asp Asn Asp Gly Lys Lys Ile His Cys Ala Val Lys Ser Leu
 35 40 45

Asn Arg Ile Thr Asp Ile Gly Glu Val Ser Gln Phe Leu Thr Glu Gly
 50 55 60

Ile Ile Met Lys Asp Phe Ser His Pro Asn Val Leu Ser Leu Leu Gly
 65 70 75 80

Ile Cys Leu Arg Ser Glu Gly Ser Pro Leu Val Val Leu Pro Tyr Met
85 90 95

Lys His Gly Asp Leu Arg Asn Phe Ile Arg Asn Glu Thr His Asn Pro
100 105 110

Thr Val Lys Asp Leu Ile Gly Phe Gly Leu Gln Val Ala Lys Gly Met
115 120 125

Lys Tyr Leu Ala Ser Lys Lys Phe Val His Arg Asp Leu Ala Ala Arg
130 135 140

Asn Cys Met Leu Asp Glu Lys Phe Thr Val Lys Val Ala Asp Phe Gly
145 150 155 160

Leu Ala Arg Asp Met Tyr Asp Lys Glu Tyr Tyr Ser Val His Asn Lys
165 170 175

Thr Gly Ala Lys Leu Pro Val Lys Trp Met Ala Leu Glu Ser Leu Gln
180 185 190

Thr Gln Lys Phe Thr Thr Lys Ser Asp Val Trp Ser Phe Gly Val Val
195 200 205

Leu Trp Glu Leu Met Thr Arg Gly Ala Pro Pro Tyr Pro Asp Val Asn
210 215 220

Thr Phe Asp Ile Thr Val Tyr Leu Leu Gln Gly Arg Arg Leu Leu Gln
225 230 235 240

Pro Glu Tyr Cys Pro Asp Pro Leu Tyr Glu Val Met Leu Lys Cys Trp
245 250 255

His Pro Lys Ala Glu Met Arg Pro Ser Phe Ser Glu Leu Val Ser Arg
260 265 270

Ile Ser Ala Ile Phe Ser Thr Phe Ile Gly
275 280

<210> 20

<211> 294

<212> PRT

<213> Homo sapiens

<400> 20

Phe Ser Asp Ala Cys Val His His Ile Lys Arg Arg Asp Ile Val Leu
1 5 10 15

Lys Trp Glu Leu Gly Glu Gly Ala Phe Gly Lys Val Phe Leu Ala Glu
20 25 30

Cys His Asn Leu Leu Pro Glu Gln Asp Lys Met Leu Val Ala Val Lys
35 40 45

Ala Leu Lys Glu Ala Ser Glu Ser Ala Arg Gln Asp Phe Gln Arg Glu
50 55 60

Ala Glu Leu Leu Thr Met Leu Gln His Gln His Ile Val Arg Phe Phe
 65 70 75 80
 Gly Val Cys Thr Glu Gly Arg Pro Leu Leu Met Val Phe Glu Tyr Met
 85 90 95
 Arg His Gly Asp Leu Asn Arg Phe Leu Arg Ser His Gly Pro Asp Ala
 100 105 110
 Lys Leu Leu Ala Gly Gly Glu Asp Val Ala Pro Gly Pro Leu Gly Leu
 115 120 125
 Gly Gln Leu Leu Ala Val Ala Ser Gln Val Ala Ala Gly Met Val Tyr
 130 135 140
 Leu Ala Gly Leu His Phe Val His Arg Asp Leu Ala Thr Arg Asn Cys
 145 150 155 160
 Leu Val Gly Gln Gly Leu Val Val Lys Ile Gly Asp Phe Gly Met Ser
 165 170 175
 Arg Asp Ile Tyr Ser Thr Asp Tyr Tyr Arg Val Gly Gly Arg Thr Met
 180 185 190
 Leu Pro Ile Arg Trp Met Pro Pro Glu Ser Ile Leu Tyr Arg Lys Phe
 195 200 205
 Thr Thr Glu Ser Asp Val Trp Ser Phe Gly Val Val Leu Trp Glu Ile
 210 215 220
 Phe Thr Tyr Gly Lys Gln Pro Trp Tyr Gln Leu Ser Asn Thr Glu Ala
 225 230 235 240
 Ile Asp Cys Ile Thr Gln Gly Arg Glu Leu Glu Arg Pro Arg Ala Cys
 245 250 255
 Pro Pro Glu Val Tyr Ala Ile Met Arg Gly Cys Trp Gln Arg Glu Pro
 260 265 270
 Gln Gln Arg His Ser Ile Lys Asp Val His Ala Arg Leu Gln Ala Leu
 275 280 285
 Ala Gln Ala Pro Pro Val
 290

<210> 21
 <211> 290
 <212> PRT
 <213> Homo sapiens

<400> 21
 Lys Glu Lys Leu Arg Asp Val Met Val Asp Arg His Lys Val Ala Leu
 1 5 10 15
 Gly Lys Thr Leu Gly Glu Gly Glu Phe Gly Ala Val Met Glu Gly Gln
 20 25 30

Leu Asn Gln Asp Asp Ser Ile Leu Lys Val Ala Val Lys Thr Met Lys
 35 40 45
 Ile Ala Ile Cys Thr Arg Ser Glu Leu Glu Asp Phe Leu Ser Glu Ala
 50 55 60
 Val Cys Met Lys Glu Phe Asp His Pro Asn Val Met Arg Leu Ile Gly
 65 70 75 80
 Val Cys Phe Gln Gly Ser Glu Arg Glu Ser Phe Pro Ala Pro Val Val
 85 90 95
 Ile Leu Pro Phe Met Lys His Gly Asp Leu His Ser Phe Leu Leu Tyr
 100 105 110
 Ser Arg Leu Gly Asp Gln Pro Val Tyr Leu Pro Thr Gln Met Leu Val
 115 120 125
 Lys Phe Met Ala Asp Ile Ala Ser Gly Met Glu Tyr Leu Ser Thr Lys
 130 135 140
 Arg Phe Ile His Arg Asp Leu Ala Ala Arg Asn Cys Met Leu Asn Glu
 145 150 155 160
 Asn Met Ser Val Cys Val Ala Asp Phe Gly Leu Ser Lys Lys Ile Tyr
 165 170 175
 Asn Gly Asp Tyr Tyr Arg Gln Gly Arg Ile Ala Lys Met Pro Val Lys
 180 185 190
 Trp Ile Ala Ile Glu Ser Leu Ala Asp Arg Val Tyr Thr Ser Lys Ser
 195 200 205
 Asp Val Trp Ser Phe Gly Val Thr Met Trp Glu Ile Ala Thr Arg Gly
 210 215 220
 Gln Thr Pro Tyr Pro Gly Val Glu Asn Ser Glu Ile Tyr Asp Tyr Leu
 225 230 235 240
 Arg Gln Gly Asn Arg Leu Lys Gln Pro Ala Asp Cys Leu Asp Gly Leu
 245 250 255
 Tyr Ala Leu Met Ser Arg Cys Trp Glu Leu Asn Pro Gln Asp Arg Pro
 260 265 270
 Ser Phe Thr Glu Leu Arg Glu Asp Leu Glu Asn Thr Leu Lys Ala Leu
 275 280 285
 Pro Pro
 290

<210> 22

<211> 291

<212> PRT

<213> Homo sapiens

<400> 22

Pro Glu Pro Leu Ser Tyr Pro Val Leu Glu Trp Glu Asp Ile Thr Phe
 1 5 10 15

Glu Asp Leu Ile Gly Glu Gly Asn Phe Gly Gln Val Ile Arg Ala Met
 20 25 30

Ile Lys Lys Asp Gly Leu Lys Met Asn Ala Ala Ile Lys Met Leu Lys
 35 40 45

Glu Tyr Ala Ser Glu Asn Asp His Arg Asp Phe Ala Gly Glu Leu Glu
 50 55 60

Val Leu Cys Lys Leu Gly His His Pro Asn Ile Ile Asn Leu Leu Gly
 65 70 75 80

Ala Cys Lys Asn Arg Gly Tyr Leu Tyr Ile Ala Ile Glu Tyr Ala Pro
 85 90 95

Tyr Gly Asn Leu Leu Asp Phe Leu Arg Lys Ser Arg Val Leu Glu Thr
 100 105 110

Asp Pro Ala Phe Ala Arg Glu His Gly Thr Ala Ser Thr Leu Ser Ser
 115 120 125

Arg Gln Leu Leu Arg Phe Ala Ser Asp Ala Ala Asn Gly Met Gln Tyr
 130 135 140

Leu Ser Glu Lys Gln Phe Ile His Arg Asp Leu Ala Ala Arg Asn Val
 145 150 155 160

Leu Val Gly Glu Asn Leu Ala Ser Lys Ile Ala Asp Phe Gly Leu Ser
 165 170 175

Arg Gly Glu Glu Val Tyr Val Lys Lys Thr Met Gly Arg Leu Pro Val
 180 185 190

Arg Trp Met Ala Ile Glu Ser Leu Asn Tyr Ser Val Tyr Thr Thr Lys
 195 200 205

Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Val Ser Leu
 210 215 220

Gly Gly Thr Pro Tyr Cys Gly Met Thr Cys Ala Glu Leu Tyr Glu Lys
 225 230 235 240

Leu Pro Gln Gly Tyr Arg Met Glu Gln Pro Arg Asn Cys Asp Asp Glu
 245 250 255

Val Tyr Glu Leu Met Arg Gln Cys Trp Arg Asp Arg Pro Tyr Glu Arg
 260 265 270

Pro Pro Phe Ala Gln Ile Ala Leu Gln Leu Gly Arg Met Leu Glu Ala
 275 280 285

Arg Lys Ala
 290

<210> 23
 <211> 279
 <212> PRT
 <213> Homo sapiens

<400> 23

Trp	Ser	Asn	Phe	Pro	Ser	Arg	Glu	Leu	Asp	Pro	Ala	Trp	Leu	Met	Val
1				5					10					15	
Asp	Thr	Val	Ile	Gly	Glu	Gly	Glu	Phe	Gly	Glu	Val	Tyr	Arg	Gly	Thr
		20						25					30		
Leu	Arg	Leu	Pro	Ser	Gln	Asp	Cys	Lys	Thr	Val	Ala	Ile	Lys	Thr	Leu
	35					40						45			
Lys	Asp	Thr	Ser	Pro	Gly	Gly	Gln	Trp	Trp	Asn	Phe	Leu	Arg	Glu	Ala
	50					55					60				
Thr	Ile	Met	Gly	Gln	Phe	Ser	His	Pro	His	Ile	Leu	His	Leu	Glu	Gly
	65				70					75				80	
Val	Val	Thr	Lys	Arg	Lys	Pro	Ile	Met	Ile	Ile	Thr	Glu	Phe	Met	Glu
			85						90					95	
Asn	Gly	Ala	Leu	Asp	Ala	Phe	Leu	Arg	Glu	Arg	Glu	Asp	Gln	Leu	Val
		100						105					110		
Pro	Gly	Gln	Leu	Val	Ala	Met	Leu	Gln	Gly	Ile	Ala	Ser	Gly	Met	Asn
		115					120					125			
Tyr	Leu	Ser	Asn	His	Asn	Tyr	Val	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn
	130					135					140				
Ile	Leu	Val	Asn	Gln	Asn	Leu	Cys	Cys	Lys	Val	Ser	Asp	Phe	Gly	Leu
	145				150					155				160	
Thr	Arg	Leu	Leu	Asp	Asp	Phe	Asp	Gly	Thr	Tyr	Glu	Thr	Gln	Gly	Gly
			165						170					175	
Lys	Ile	Pro	Ile	Arg	Trp	Thr	Ala	Pro	Glu	Ala	Ile	Ala	His	Arg	Ile
			180					185					190		
Phe	Thr	Thr	Ala	Ser	Asp	Val	Trp	Ser	Phe	Gly	Ile	Val	Met	Trp	Glu
		195					200					205			
Val	Leu	Ser	Phe	Gly	Asp	Lys	Pro	Tyr	Gly	Glu	Met	Ser	Asn	Gln	Glu
	210					215					220				
Val	Met	Lys	Ser	Ile	Glu	Asp	Gly	Tyr	Arg	Leu	Pro	Pro	Pro	Val	Asp
	225				230					235				240	
Cys	Pro	Ala	Pro	Leu	Tyr	Glu	Leu	Met	Lys	Asn	Cys	Trp	Ala	Tyr	Asp
			245						250					255	
Arg	Ala	Arg	Arg	Pro	His	Phe	Gln	Lys	Leu	Gln	Ala	His	Leu	Glu	Gln
			260					265					270		

Leu Leu Ala Asn Pro His Ser
275

<210> 24
<211> 291
<212> PRT
<213> Homo sapiens

<400> 24

Lys	Gly	Lys	Val	Lys	Asp	Ile	Ala	Ile	Ser	Arg	Glu	Arg	Ile	Thr	Leu	1	5	10	15
Lys	Asp	Val	Leu	Gln	Glu	Gly	Thr	Phe	Gly	Arg	Ile	Phe	His	Gly	Ile	20		25	30
Leu	Ile	Asp	Glu	Lys	Asp	Pro	Asn	Lys	Glu	Lys	Gln	Ala	Phe	Val	Lys	35	40	45	
Thr	Val	Lys	Asp	Gln	Ala	Ser	Glu	Ile	Gln	Val	Thr	Met	Met	Leu	Thr	50	55	60	
Glu	Ser	Cys	Lys	Leu	Arg	Gly	Leu	His	His	Arg	Asn	Leu	Leu	Pro	Ile	65	70	75	80
Thr	His	Val	Cys	Ile	Glu	Glu	Gly	Glu	Lys	Pro	Met	Val	Ile	Leu	Pro	85	90	95	
Tyr	Met	Asn	Trp	Gly	Asn	Leu	Lys	Leu	Phe	Leu	Arg	Gln	Cys	Lys	Leu	100	105	110	
Val	Glu	Ala	Asn	Asn	Pro	Gln	Ala	Ile	Ser	Gln	Gln	Asp	Leu	Val	His	115	120	125	
Met	Ala	Ile	Gln	Ile	Ala	Cys	Gly	Met	Ser	Tyr	Leu	Ala	Arg	Arg	Glu	130	135	140	
Val	Ile	His	Lys	Asp	Leu	Ala	Ala	Arg	Asn	Cys	Val	Ile	Asp	Asp	Thr	145	150	155	160
Leu	Gln	Val	Lys	Ile	Thr	Asp	Asn	Ala	Leu	Ser	Arg	Asp	Leu	Phe	Pro	165	170	175	
Met	Asp	Tyr	His	Cys	Leu	Gly	Asp	Asn	Glu	Asn	Arg	Pro	Val	Arg	Trp	180	185	190	
Met	Ala	Leu	Glu	Ser	Leu	Val	Asn	Asn	Glu	Phe	Ser	Ser	Ala	Ser	Asp	195	200	205	
Val	Trp	Ala	Phe	Gly	Val	Asn	Ser	Leu	Trp	Glu	Leu	Met	Thr	Leu	Gly	210	215	220	
Gln	Thr	Pro	Tyr	Thr	Leu	Asp	Ile	Asp	Pro	Phe	Glu	Met	Ala	Ala	Tyr	225	230	235	240
Leu	Lys	Asp	Gly	Tyr	Arg	Ile	Ala	Gln	Pro	Ile	Thr	Cys	Pro	Asp	Glu	245	250	255	

Leu Phe Ala Val Met Ala Cys Cys Trp Ala Leu Asp Pro Glu Glu Arg
 260 265 270

Pro Arg Phe Gln Gln Leu Val Gln Cys Leu Thr Glu Phe His Ala Ala
 275 280 285

Leu Gly Ala
 290

<210> 25

<211> 317

<212> PRT

<213> Homo sapiens

<400> 25

Gly Asp Gly Pro Pro Arg Val Asp Phe Pro Arg Ser Arg Leu Arg Phe
 1 5 10 15

Lys Glu Lys (Leu) Gly Phe Gly Gln Phe Gly Glu Val His Leu Cys Glu
 20 25 30

Val Asp Ser Pro Gln Asp Leu Val Ser Leu Asp Phe Pro Leu Asn Val
 35 40 45

Arg Lys Gly His Pro Leu Leu Val Ala Val Lys Ile Leu Arg Pro Asp
 50 55 60

Ala Thr Lys Asn Ala Arg Asn Asp Phe Leu Lys Glu Val Lys Ile Met
 65 70 75 80

Ser Arg Leu Lys Asp Pro Asn Ile Ile Arg Leu Leu Gly Val Cys Val
 85 90 95

Gln Asp Asp Pro Leu Cys Met Ile Thr Asp Tyr Met Glu Asn Gly Asp
 100 105 110

Leu Asn Gln Phe Leu Ser Ala His Gln Leu Glu Asp Lys Ala Ala Glu
 115 120 125

Gly Ala Pro Gly Asp Gly Gln Ala Ala Gln Gly Pro Thr Ile Ser Tyr
 130 135 140

Pro Met Leu Leu His Val Ala Ala Gln Ile Ala Ser Gly Met Arg Tyr
 145 150 155 160

Leu Ala Thr Leu Asn Phe Val His Arg Asp Leu Ala Thr Arg Asn Cys
 165 170 175

Leu Val Gly Glu Asn Phe Thr Ile Lys Ile Ala Asp Phe (Gly) Met Ser
 180 185 190

Arg Asn Leu Tyr Ala Gly Asp Tyr Tyr Arg Val Gln Gly Arg Ala Val
 195 200 205

Leu Pro Ile Arg Trp Met Ala Trp Glu (Cys) Ile Leu Met Gly Lys Phe
 210 215 220

Thr Thr Ala Ser Asp Val Trp Ala Phe Gly Val Thr Val Trp Glu Val
225 230 235 240

Leu Met Leu Cys Arg Ala Gln Pro Phe Gly Gln Leu Thr Asp Glu Gln
245 250 255

Val Ile Glu Asn Ala Gly Glu Phe Phe Arg Asp Gln Gly Arg Gln Val
260 265 270

Tyr Leu Ser Arg Pro Pro Ala Cys Pro Gln Gly Leu Tyr Glu Leu Met
275 280 285

Leu Arg Cys Trp Gly Arg Glu Ser Glu Gln Arg Pro Pro Phe Ser Gln
290 295 300

Leu His Arg Phe Leu Ala Glu Asp Ala Leu Asn Thr Val
305 310 315

<210> 26

<211> 293

<212> PRT

<213> Homo sapiens

<400> 26

Glu Glu Ile Glu Asn Leu Pro Ala Phe Pro Arg Glu Lys Leu Thr Leu
1 5 10 15

Arg Leu Leu Leu Gly Ser Gly Ala Phe Gly Glu Val Tyr Glu Gly Thr
20 25 30

Ala Val Asp Ile Leu Gly Val Gly Ser Gly Glu Ile Lys Val Ala Val
35 40 45

Lys Thr Leu Lys Lys Gly Ser Thr Asp Gln Glu Lys Ile Glu Phe Leu
50 55 60

Lys Glu Ala His Leu Met Ser Lys Phe Asn His Pro Asn Ile Leu Lys
65 70 75 80

Gln Leu Gly Val Cys Leu Leu Asn Glu Pro Gln Tyr Ile Ile Leu Glu
85 90 95

Leu Met Glu Gly Gly Asp Leu Leu Thr Tyr Leu Arg Lys Ala Arg Met
100 105 110

Ala Thr Phe Tyr Gly Pro Leu Leu Thr Leu Val Asp Leu Val Asp Leu
115 120 125

Cys Val Asp Ile Ser Lys Gly Cys Val Tyr Leu Glu Arg Met His Phe
130 135 140

Ile His Arg Asp Leu Ala Ala Arg Asn Cys Leu Val Ser Val Lys Asp
145 150 155 160

Tyr Thr Ser Pro Arg Ile Val Lys Ile Gly Asp Phe Gly Leu Ala Arg
165 170 175

Asp Ile Tyr Lys Asn Asp Tyr Tyr Arg Lys Arg Gly Glu Gly Leu Leu
180 185 190

Pro Val Arg Trp Met Ala Pro Glu Ser Leu Met Asp Gly Ile Phe Thr
195 200 205

Thr Gln Ser Asp Val Trp Ser Phe Gly Ile Leu Ile Trp Glu Ile Leu
210 215 220

Thr Leu Gly His Gln Pro Tyr Pro Ala His Ser Asn Leu Asp Val Leu
225 230 235 240

Asn Tyr Val Gln Thr Gly Gly Arg Leu Glu Pro Pro Arg Asn Cys Pro
245 250 255

Asp Asp Leu Trp Asn Leu Met Thr Gln Cys Trp Ala Gln Glu Pro Asp
260 265 270

Gln Arg Pro Thr Phe His Arg Ile Gln Asn Gln Leu Gln Leu Phe Arg
275 280 285

Asn Phe Phe Leu Asn
290

<210> 27

<211> 304

<212> PRT

<213> Homo sapiens

<400> 27

Ile Leu Glu Asp Pro Lys Trp Glu Phe Pro Arg Lys Asn Leu Val Leu
1 5 10 15

Gly Lys Thr Leu Gly Glu Gly Glu Phe Gly Lys Val Val Lys Ala Thr
20 25 30

Ala Phe His Leu Lys Gly Arg Ala Gly Tyr Thr Thr Val Ala Val Lys
35 40 45

Met Leu Lys Glu Asn Ala Ser Pro Ser Glu Leu Arg Asp Leu Leu Ser
50 55 60

Glu Phe Asn Val Leu Lys Gln Val Asn His Pro His Val Ile Lys Leu
65 70 75 80

Tyr Gly Ala Cys Ser Gln Asp Gly Pro Leu Leu Leu Ile Val Glu Tyr
85 90 95

Ala Lys Tyr Gly Ser Leu Arg Gly Phe Leu Arg Glu Ser Arg Lys Val
100 105 110

Gly Pro Gly Tyr Leu Gly Ser Gly Gly Ser Arg Asn Ser Ser Ser Leu
115 120 125

Asp His Pro Asp Glu Arg Ala Leu Thr Met Gly Asp Leu Ile Ser Phe
130 135 140

Ala Trp Gln Ile Ser Gln Gly Met Gln Tyr Leu Ala Glu Met Lys Leu
 145 150 155 160

Val His Arg Asp Leu Ala Ala Arg Asn Ile Leu Val Ala Glu Gly Arg
 165 170 175

Lys Met Lys Ile Ser Asp Phe Gly Leu Ser Arg Asp Val Tyr Glu Glu
 180 185 190

Asp Ser Tyr Val Lys Arg Ser Gln Gly Arg Ile Pro Val Lys Trp Met
 195 200 205

Ala Ile Glu Ser Leu Phe Asp His Ile Tyr Thr Thr Gln Ser Asp Val
 210 215 220

Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Val Thr Leu Gly Gly Asn
 225 230 235 240

Pro Tyr Pro Gly Ile Pro Pro Glu Arg Leu Phe Asn Leu Leu Lys Thr
 245 250 255

Gly His Arg Met Glu Arg Pro Asp Asn Cys Ser Glu Glu Met Tyr Arg
 260 265 270

Leu Met Leu Gln Cys Trp Lys Gln Glu Pro Asp Lys Arg Pro Val Phe
 275 280 285

Ala Asp Ile Ser Lys Asp Leu Glu Lys Met Met Val Lys Arg Arg Asp
 290 295 300

<210> 28

<211> 290

<212> PRT

<213> Homo sapiens

<400> 28

Pro Leu Pro Pro Gly Val Thr Glu Val Ser Pro Ala Asn Val Thr Leu
 1 5 10 15

Leu Arg Ala Leu Gly His Gly Ala Phe Gly Glu Val Tyr Glu Gly Leu
 20 25 30

Val Ile Gly Leu Pro Gly Asp Ser Ser Pro Leu Gln Val Ala Ile Lys
 35 40 45

Thr Leu Pro Glu Leu Cys Ser Pro Gln Asp Glu Leu Asp Phe Leu Met
 50 55 60

Glu Ala Leu Ile Ile Ser Lys Phe Arg His Gln Asn Ile Val Arg Cys
 65 70 75 80

Val Gly Leu Ser Leu Arg Ala Thr Pro Arg Leu Ile Leu Leu Glu Leu
 85 90 95

Met Ser Gly Gly Asp Met Lys Ser Phe Leu Arg His Ser Arg Pro His
 100 105 110

Leu Gly Gln Pro Ser Pro Leu Val Met Arg Asp Leu Leu Gln Leu Ala
 115 120 125
 Gln Asp Ile Ala Gln Gly Cys His Tyr Leu Glu Glu Asn His Phe Ile
 130 135 140
 His Arg Asp Ile Ala Ala Arg Asn Cys Leu Leu Ser Cys Ala Gly Pro
 145 150 155 160
 Ser Arg Val Ala Lys Ile Gly Asp Phe Gly Met Ala Arg Asp Ile Tyr
 165 170 175
 Arg Ala Ser Tyr Tyr Arg Arg Gly Asp Arg Ala Leu Leu Pro Val Lys
 180 185 190
 Trp Met Pro Pro Glu Ala Phe Leu Glu Gly Ile Phe Thr Ser Lys Thr
 195 200 205
 Asp Ser Trp Ser Phe Gly Val Leu Leu Trp Glu Ile Phe Ser Leu Gly
 210 215 220
 Tyr Met Pro Tyr Pro Gly Arg Thr Asn Gln Glu Val Leu Asp Phe Val
 225 230 235 240
 Val Gly Gly Gly Arg Met Asp Pro Pro Arg Gly Cys Pro Gly Pro Val
 245 250 255
 Tyr Arg Ile Met Thr Gln Cys Trp Gln His Glu Pro Glu Leu Arg Pro
 260 265 270
 Ser Phe Ala Ser Ile Leu Glu Arg Leu Gln Tyr Cys Thr Gln Asp Pro
 275 280 285
 Asp Val
 290

<210> 29
 <211> 296
 <212> PRT
 <213> Homo sapiens

<400> 29
 Lys Pro Lys Ser Lys Ala Lys Glu Leu Pro Leu Ser Ala Val Arg Phe
 1 5 10 15
 Met Glu Glu Leu Gly Glu Cys Ala Phe Gly Lys Ile Tyr Lys Gly His
 20 25 30
 Leu Tyr Leu Pro Gly Met Asp His Ala Gln Leu Val Ala Ile Lys Thr
 35 40 45
 Leu Lys Asp Tyr Asn Asn Pro Gln Gln Trp Met Glu Phe Gln Gln Glu
 50 55 60
 Ala Ser Leu Met Ala Glu Leu His His Pro Asn Ile Val Cys Leu Leu
 65 70 75 80

<210> 30
<211> 304
<212> PRT
<213> Mus sp.

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<400> 30
Asn Pro Lys Leu Leu Ser Leu Glu Tyr Pro Arg Asn Asn Ile Glu Tyr
  1             5             10             15
Val Arg Asp Ile Gly Glu Gly Ala Phe Gly Arg Val Phe Gln Ala Arg
             20             25             30
Ala Pro Gly Leu Leu Pro Tyr Glu Pro Phe Thr Met Val Ala Val Lys
      35             40             45

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Met Leu Lys Glu Glu Ala Ser Ala Asp Met Gln Ala Asp Phe Gln Arg
 50 55 60
 Glu Ala Ala Leu Met Ala Glu Phe Asp Asn Pro Asn Ile Val Lys Leu
 65 70 75 80
 Leu Gly Val Cys Ala Val Gly Lys Pro Met Cys Leu Leu Phe Glu Tyr
 85 90 95
 Met Ala Tyr Gly Asp Leu Asn Glu Phe Leu Arg Ser Met Ser Pro His
 100 105 110
 Thr Val Cys Ser Leu Ser His Ser Asp Leu Ser Thr Arg Ala Arg Val
 115 120 125
 Ser Ser Pro Gly Pro Pro Pro Leu Ser Cys Ala Glu Gln Leu Cys Ile
 130 135 140
 Ala Arg Gln Val Ala Ala Gly Met Ala Tyr Leu Ser Glu Arg Lys Phe
 145 150 155 160
 Val His Arg Asp Leu Ala Thr Arg Asn Cys Leu Val Gly Glu Thr Met
 165 170 175
 Val Val Lys Ile Ala Asp Phe Gly Leu Ser Arg Asn Ile Tyr Ser Ala
 180 185 190
 Asp Tyr Tyr Lys Ala Asp Gly Asn Asp Ala Ile Pro Ile Arg Trp Met
 195 200 205
 Pro Pro Glu Ser Ile Phe Tyr Asn Arg Tyr Thr Thr Glu Ser Asp Val
 210 215 220
 Trp Ala Tyr Gly Val Val Leu Trp Glu Ile Phe Ser Tyr Gly Leu Gln
 225 230 235 240
 Pro Tyr Tyr Gly Met Ala His Glu Glu Val Ile Tyr Tyr Val Arg Asp
 245 250 255
 Gly Asn Ile Leu Ala Cys Pro Glu Asn Cys Pro Leu Glu Leu Tyr Asn
 260 265 270
 Leu Met Arg Leu Cys Trp Ser Lys Leu Pro Ala Asp Arg Pro Ser Phe
 275 280 285
 Cys Ser Ile His Arg Ile Leu Gln Arg Met Cys Glu Arg Ala Glu Gly
 290 295 300

<210> 31

<211> 300

<212> PRT

<213> Homo sapiens

<400> 31

Leu Pro Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu Val Leu
 1 5 10 15

Gly Lys Pro Leu Gly Glu Gly Cys Phe Gly Gln Val Val Leu Ala Glu
 20 25 30
 Ala Ile Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys Val Ala
 35 40 45
 Val Lys Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser Asp Leu
 50 55 60
 Ile Ser Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys Asn Ile
 65 70 75 80
 Ile Asn Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr Val Ile
 85 90 95
 Val Glu Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln Ala Arg
 100 105 110
 Arg Pro Pro Gly Leu Glu Tyr Cys Tyr Asn Pro Ser His Asn Pro Glu
 115 120 125
 Glu Gln Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln Val Ala
 130 135 140
 Arg Gly Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg Asp Leu
 145 150 155 160
 Ala Ala Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys Ile Ala
 165 170 175
 Asp Phe Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr Lys Lys
 180 185 190
 Thr Thr Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ala Leu
 195 200 205
 Phe Asp Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe Gly Val
 210 215 220
 Leu Leu Trp Glu Ile Phe Thr Leu Gly Gly Ser Pro Tyr Pro Gly Val
 225 230 235 240
 Pro Val Glu Glu Leu Phe Lys Leu Leu Lys Glu Gly His Arg Met Asp
 245 250 255
 Lys Pro Ser Asn Cys Thr Asn Glu Leu Tyr Met Met Met Arg Asp Cys
 260 265 270
 Trp His Ala Val Pro Ser Gln Arg Pro Thr Phe Lys Gln Leu Val Glu
 275 280 285
 Asp Leu Asp Arg Ile Val Ala Leu Thr Ser Asn Gln
 290 295 300

<210> 32

<211> 273

<212> PRT

<213> Homo sapiens

<400> 32

Gly Leu Ala Lys Asp Ala Trp Glu Ile Pro Arg Glu Ser Leu Arg Leu
 1 5 10 15

Glu Val Lys Leu Gly Gln Gly Cys Phe Gly Glu Val Trp Met Gly Thr
 20 25 30

Trp Asn Gly Thr Thr Arg Val Ala Ile Lys Thr Leu Lys Pro Gly Thr
 35 40 45

Met Ser Pro Glu Ala Phe Leu Gln Glu Ala Gln Val Met Lys Lys Leu
 50 55 60

Arg His Glu Lys Leu Val Gln Leu Tyr Ala Val Val Ser Glu Glu Pro
 65 70 75 80

Ile Tyr Ile Val Thr Glu Tyr Met Ser Lys Gly Ser Leu Leu Asp Phe
 85 90 95

Leu Lys Gly Glu Thr Gly Lys Tyr Leu Arg Leu Pro Gln Leu Val Asp
 100 105 110

Met Ala Ala Gln Ile Ala Ser Gly Met Ala Tyr Val Glu Arg Met Asn
 115 120 125

Tyr Val His Arg Asp Leu Arg Ala Ala Asn Ile Leu Val Gly Glu Asn
 130 135 140

Leu Val Cys Lys Val Ala Asp Phe Gly Leu Ala Arg Leu Ile Glu Asp
 145 150 155 160

Asn Glu Tyr Thr Ala Arg Gln Gly Ala Lys Phe Pro Ile Lys Trp Thr
 165 170 175

Ala Pro Glu Ala Ala Leu Tyr Gly Arg Phe Thr Ile Lys Ser Asp Val
 180 185 190

Trp Ser Phe Gly Ile Leu Leu Thr Glu Leu Thr Thr Lys Gly Arg Val
 195 200 205

Pro Tyr Pro Gly Met Val Asn Arg Glu Val Leu Asp Gln Val Glu Arg
 210 215 220

Gly Tyr Arg Met Pro Cys Pro Pro Glu Cys Pro Glu Ser Leu His Asp
 225 230 235 240

Leu Met Cys Gln Cys Trp Arg Lys Glu Pro Glu Glu Arg Pro Thr Phe
 245 250 255

Glu Tyr Leu Gln Ala Phe Leu Glu Asp Tyr Phe Thr Ser Thr Glu Pro
 260 265 270

Gln

<210> 33
 <211> 274
 <212> PRT
 <213> Homo sapiens

<400> 33

Leu	Pro	His	Trp	Asp	Asp	Trp	Glu	Arg	Pro	Arg	Glu	Glu	Phe	Thr	Leu
1				5					10					15	
Cys	Arg	Lys	Leu	Gly	Ser	Gly	Tyr	Phe	Gly	Glu	Val	Phe	Glu	Gly	Leu
			20					25					30		
Trp	Lys	Asp	Arg	Val	Gln	Val	Ala	Ile	Lys	Val	Ile	Ser	Arg	Asp	Asn
		35					40					45			
Leu	Leu	His	Gln	Gln	Met	Leu	Gln	Ser	Glu	Ile	Gln	Ala	Met	Lys	Lys
	50					55					60				
Leu	Arg	His	Lys	His	Ile	Leu	Ala	Leu	Tyr	Ala	Val	Val	Ser	Val	Gly
	65				70					75					80
Asp	Pro	Val	Tyr	Ile	Ile	Thr	Glu	Leu	Met	Ala	Lys	Gly	Ser	Leu	Leu
				85					90					95	
Glu	Leu	Leu	Arg	Asp	Ser	Asp	Glu	Lys	Val	Leu	Pro	Val	Ser	Glu	Leu
			100					105					110		
Leu	Asp	Ile	Ala	Trp	Gln	Val	Ala	Glu	Gly	Met	Cys	Tyr	Leu	Glu	Ser
	115						120					125			
Gln	Asn	Tyr	Ile	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Ile	Leu	Val	Gly
	130					135					140				
Glu	Asn	Thr	Leu	Cys	Lys	Val	Gly	Asp	Phe	Gly	Leu	Ala	Arg	Leu	Ile
145					150					155					160
Lys	Glu	Asp	Val	Tyr	Leu	Ser	His	Asp	His	Asn	Ile	Pro	Tyr	Lys	Trp
				165					170					175	
Thr	Ala	Pro	Glu	Ala	Leu	Ser	Arg	Gly	His	Tyr	Ser	Thr	Lys	Ser	Asp
			180					185					190		
Val	Trp	Ser	Phe	Gly	Ile	Leu	Leu	His	Glu	Met	Phe	Ser	Arg	Gly	Gln
			195				200					205			
Val	Pro	Tyr	Pro	Gly	Met	Ser	Asn	His	Glu	Ala	Phe	Leu	Arg	Val	Asp
	210					215					220				
Ala	Gly	Tyr	Arg	Met	Pro	Cys	Pro	Leu	Glu	Cys	Pro	Pro	Ser	Val	His
225					230					235					240
Lys	Leu	Met	Leu	Thr	Cys	Trp	Cys	Arg	Asp	Pro	Glu	Gln	Arg	Pro	Cys
				245					250					255	
Phe	Lys	Ala	Leu	Arg	Glu	Arg	Leu	Ser	Ser	Phe	Thr	Ser	Tyr	Glu	Asn
			260					265					270		

Pro Thr

<210> 34

<211> 271

<212> PRT

<213> Homo sapiens

<400> 34

Gly	Leu	Gly	Tyr	Gly	Ser	Trp	Glu	Ile	Asp	Pro	Lys	Asp	Leu	Thr	Phe	1	5	10	15
Leu	Lys	Glu	Leu	Gly	Thr	Gly	Gln	Phe	Gly	Val	Val	Lys	Tyr	Gly	Lys	20	25	30	
Trp	Arg	Gly	Gln	Tyr	Asp	Val	Ala	Ile	Lys	Met	Ile	Lys	Glu	Gly	Ser	35	40	45	
Met	Ser	Glu	Asp	Glu	Phe	Ile	Glu	Glu	Ala	Lys	Val	Met	Met	Asn	Leu	50	55	60	
Ser	His	Glu	Lys	Leu	Val	Gln	Leu	Tyr	Gly	Val	Cys	Thr	Lys	Gln	Arg	65	70	75	80
Pro	Ile	Phe	Ile	Ile	Thr	Glu	Tyr	Met	Ala	Asn	Gly	Cys	Leu	Leu	Asn	85	90	95	
Tyr	Leu	Arg	Glu	Met	Arg	His	Arg	Phe	Gln	Thr	Gln	Gln	Leu	Leu	Glu	100	105	110	
Met	Cys	Lys	Asp	Val	Cys	Glu	Ala	Met	Glu	Tyr	Leu	Glu	Ser	Lys	Gln	115	120	125	
Phe	Leu	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Cys	Leu	Val	Asn	Asp	Gln	130	135	140	
Gly	Val	Val	Lys	Val	Ser	Asp	Phe	Gly	Leu	Ser	Arg	Tyr	Val	Leu	Asp	145	150	155	160
Asp	Glu	Tyr	Thr	Ser	Ser	Val	Gly	Ser	Lys	Phe	Pro	Val	Arg	Trp	Ser	165	170	175	
Pro	Pro	Glu	Val	Leu	Met	Tyr	Ser	Lys	Phe	Ser	Ser	Lys	Ser	Asp	Ile	180	185	190	
Trp	Ala	Phe	Gly	Val	Leu	Met	Trp	Glu	Ile	Tyr	Ser	Leu	Gly	Lys	Met	195	200	205	
Pro	Tyr	Glu	Arg	Phe	Thr	Asn	Ser	Glu	Thr	Ala	Glu	His	Ile	Ala	Gln	210	215	220	
Gly	Leu	Arg	Leu	Tyr	Arg	Pro	His	Leu	Ala	Ser	Glu	Lys	Val	Tyr	Thr	225	230	235	240
Ile	Met	Tyr	Ser	Cys	Trp	His	Glu	Lys	Ala	Asp	Glu	Arg	Pro	Thr	Phe	245	250	255	

Lys Ile Leu Leu Ser Asn Ile Leu Asp Val Met Asp Glu Glu Ser
 260 265 270

<210> 35

<211> 269

<212> PRT

<213> Homo sapiens

<400> 35

Glu Phe Tyr Arg Ser Gly Trp Ala Leu Asn Met Lys Glu Leu Lys Leu
 1 5 10 15

Leu Gln Thr Ile Gly Lys Gly Glu Phe Gly Asp Val Met Leu Gly Asp
 20 25 30

Tyr Arg Gly Asn Lys Val Ala Val Lys Cys Ile Lys Asn Asp Ala Thr
 35 40 45

Ala Gln Ala Phe Leu Ala Glu Ala Ser Val Met Thr Gln Leu Arg His
 50 55 60

Ser Asn Leu Val Gln Leu Leu Gly Val Ile Val Glu Glu Lys Gly Gly
 65 70 75 80

Leu Tyr Ile Val Thr Glu Tyr Met Ala Lys Gly Ser Leu Val Asp Tyr
 85 90 95

Leu Arg Ser Arg Gly Arg Ser Val Leu Gly Gly Asp Cys Leu Leu Lys
 100 105 110

Phe Ser Leu Asp Val Cys Glu Ala Met Glu Tyr Leu Glu Gly Asn Asn
 115 120 125

Phe Val His Arg Asp Leu Ala Ala Arg Asn Val Leu Val Ser Glu Asp
 130 135 140

Asn Val Ala Lys Val Ser Asp Phe Gly Leu Thr Lys Glu Ala Ser Ser
 145 150 155 160

Thr Gln Asp Thr Gly Lys Leu Pro Val Lys Trp Thr Ala Pro Glu Ala
 165 170 175

Leu Arg Glu Lys Lys Phe Ser Thr Lys Ser Asp Val Trp Ser Phe Gly
 180 185 190

Ile Leu Leu Trp Glu Ile Tyr Ser Phe Gly Arg Val Pro Tyr Pro Arg
 195 200 205

Ile Pro Leu Lys Asp Val Val Pro Arg Val Glu Lys Gly Tyr Lys Met
 210 215 220

Asp Ala Pro Asp Gly Cys Pro Pro Ala Val Tyr Glu Val Met Lys Asn
 225 230 235 240

Cys Trp His Leu Asp Ala Ala Met Arg Pro Ser Phe Leu Gln Leu Arg
 245 250 255

Glu Gln Leu Glu His Ile Lys Thr His Glu Leu His Leu
 260 265

<210> 36

<211> 275

<212> PRT

<213> Homo sapiens

<400> 36

Ser Pro Asn Tyr Asp Lys Trp Glu Met Glu Arg Thr Asp Ile Thr Met
 1 5 10 15

Lys His Lys Leu Gly Gly Gly Gln Tyr Gly Glu Val Tyr Glu Gly Val
 20 25 30

Trp Lys Lys Tyr Ser Leu Thr Val Ala Val Lys Thr Leu Lys Glu Asp
 35 40 45

Thr Met Glu Val Glu Glu Phe Leu Lys Glu Ala Ala Val Met Lys Glu
 50 55 60

Ile Lys His Pro Asn Leu Val Gln Leu Leu Gly Val Cys Thr Arg Glu
 65 70 75 80

Pro Pro Phe Tyr Ile Ile Thr Glu Phe Met Thr Tyr Gly Asn Leu Leu
 85 90 95

Asp Tyr Leu Arg Glu Cys Asn Arg Gln Glu Val Asn Ala Val Val Leu
 100 105 110

Leu Tyr Met Ala Thr Gln Ile Ser Ser Ala Met Glu Tyr Leu Glu Lys
 115 120 125

Lys Asn Phe Ile His Arg Asp Leu Ala Ala Arg Asn Cys Leu Val Gly
 130 135 140

Glu Asn His Leu Val Lys Val Ala Asp Phe Gly Leu Ser Arg Leu Met
 145 150 155 160

Thr Gly Asp Thr Tyr Thr Ala His Ala Gly Ala Lys Phe Pro Ile Lys
 165 170 175

Trp Thr Ala Pro Glu Ser Leu Ala Tyr Asn Lys Phe Ser Ile Lys Ser
 180 185 190

Asp Val Trp Ala Phe Gly Val Leu Leu Trp Glu Ile Ala Thr Tyr Gly
 195 200 205

Met Ser Pro Tyr Pro Gly Ile Asp Leu Ser Gln Val Tyr Glu Leu Leu
 210 215 220

Glu Lys Asp Tyr Arg Met Glu Arg Pro Glu Gly Cys Pro Glu Lys Val
 225 230 235 240

Tyr Glu Leu Met Arg Ala Cys Trp Gln Trp Asn Pro Ser Asp Arg Pro
 245 250 255

Ser Phe Ala Glu Ile His Gln Ala Phe Glu Thr Met Phe Gln Glu Ser
 260 265 270

Ser Ile Ser
 275

<210> 37

<211> 279

<212> PRT

<213> Homo sapiens

<400> 37

Leu Lys Asp Lys Lys Leu Phe Leu Lys Arg Asp Asn Leu Leu Ile Ala
 1 5 10 15

Asp Ile Glu Leu Gly Cys Gly Asn Phe Gly Ser Val Arg Gln Gly Val
 20 25 30

Tyr Arg Met Arg Lys Lys Gln Ile Asp Val Ala Ile Lys Val Leu Lys
 35 40 45

Gln Gly Thr Glu Lys Ala Asp Thr Glu Glu Met Met Arg Glu Ala Gln
 50 55 60

Ile Met His Gln Leu Asp Asn Pro Tyr Ile Val Arg Leu Ile Gly Val
 65 70 75 80

Cys Gln Ala Glu Ala Leu Met Leu Val Met Glu Met Ala Gly Gly Gly
 85 90 95

Pro Leu His Lys Phe Leu Val Gly Lys Arg Glu Glu Ile Pro Val Ser
 100 105 110

Asn Val Ala Glu Leu Leu His Gln Val Ser Met Gly Met Lys Tyr Leu
 115 120 125

Glu Glu Lys Asn Phe Val His Arg Asp Leu Ala Ala Arg Asn Val Leu
 130 135 140

Leu Val Asn Arg His Tyr Ala Lys Ile Ser Asp Phe Gly Leu Ser Lys
 145 150 155 160

Ala Leu Gly Ala Asp Asp Ser Tyr Tyr Thr Ala Arg Ser Ala Gly Lys
 165 170 175

Trp Pro Leu Lys Trp Tyr Ala Pro Glu Cys Ile Asn Phe Arg Lys Phe
 180 185 190

Ser Ser Arg Ser Asp Val Trp Ser Tyr Gly Cys Thr Met Trp Glu Ala
 195 200 205

Leu Ser Tyr Gly Gln Lys Pro Tyr Lys Lys Met Lys Gly Pro Glu Val
 210 215 220

Met Ala Phe Ile Glu Gln Gly Lys Arg Met Glu Cys Pro Pro Glu Cys
 225 230 235 240

Tyr Tyr Ser Leu Ala Ser Lys
275

<213> Homo sapiens

Ala Val Pro Lys Asp Lys Trp Val Leu Asn His Glu Asp Leu Val Leu
1 5 10 15

Leu Arg Ala Asp Asn Thr Leu Val Ala Val Lys Ser Cys Arg Glu Thr
35 40 45

Leu Pro Pro Asp Leu Lys Ala Lys Phe Leu Gln Glu Ala Arg Ile Leu
50 55 60

Lys Gln Tyr Ser His Pro Asn Ile Val Arg Leu Ile Gly Val Cys Thr
65 70 75 80

Gln Lys Gln Pro Ile Tyr Ile Val Met Glu Leu Val Gln Gly Gly Asp
85 90 95

Phe Leu Thr Phe Leu Arg Thr Glu Gly Ala Arg Leu Arg Val Lys Thr
100 105 110

Leu Leu Gln Met Val Gly Asp Ala Ala Ala Gly Met Glu Tyr Leu Glu
115 120 125

Ser Lys Cys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Cys Leu Val
130 135 140

Thr Glu Lys Asn Val Leu Lys Ile Ser Asp Phe Gly Met Ser Arg Glu
145 150 155 160

Glu Ala Asp Gly Val Tyr Ala Ala Ser Gly Gly Ser Arg Gln Val Pro
165 170 175

Val Lys Trp Thr Ala Pro Glu Ala Leu Asn Tyr Gly Arg Tyr Ser Ser
180 185 190

Glu Ser Asp Val Trp Ser Phe Gly Ile Leu Leu Trp Glu Thr Phe, Ser
195 200 205

Leu Gly Ala Ser Pro Tyr Pro Asn Leu Ser Asn Gln Gln Thr Arg Glu
210 215 220

Phe Val Glu Lys Gly Gly Arg Leu Pro Cys Pro Glu Leu Cys Pro Asp
225 230 235 240

Ala Val Phe Arg Leu Met Glu Gln Cys Trp Ala Tyr Glu Pro Gly Gln
245 250 255

Arg Pro Ser Phe Ser Thr Ile Tyr Gln Glu Leu Gln Ser Ile Arg Lys
260 265 270

Arg His Arg
275

<210> 39

<211> 278

<212> PRT

<213> Homo sapiens

<400> 39

Met Pro Ser Thr Arg Asp Tyr Glu Ile Gln Arg Glu Arg Ile Glu Leu
1 5 10 15

Gly Arg Cys Ile Gly Glu Gly Gln Phe Gly Asp Val His Gln Gly Ile
20 25 30

Tyr Met Ser Pro Glu Asn Pro Ala Leu Ala Val Ala Ile Lys Thr Cys
35 40 45

Lys Asn Cys Thr Ser Asp Ser Val Arg Glu Lys Phe Leu Gln Glu Ala
50 55 60

Leu Thr Met Arg Gln Phe Asp His Pro His Ile Val Lys Leu Ile Gly
65 70 75 80

Val Ile Thr Glu Asn Pro Val Trp Ile Ile Met Glu Leu Cys Thr Leu
85 90 95

Gly Glu Leu Arg Ser Phe Leu Gln Val Arg Lys Tyr Ser Leu Asp Leu
100 105 110

Ala Ser Leu Ile Leu Tyr Ala Tyr Gln Leu Ser Thr Ala Leu Ala Tyr
115 120 125

Leu Glu Ser Lys Arg Phe Val His Arg Asp Ile Ala Ala Arg Asn Val
130 135 140

Leu Val Ser Ser Asn Asp Cys Val Lys Leu Gly Asp Phe Gly Leu Ser
145 150 155 160

Arg Tyr Met Glu Asp Ser Thr Tyr Tyr Lys Ala Ser Lys Gly Lys Leu
165 170 175

Pro Ile Lys Trp Met Ala Pro Glu Ser Ile Asn Phe Arg Arg Phe Thr
180 185 190

Ser Ala Ser Asp Val Trp Met Phe Gly Val Cys Met Trp Glu Ile Leu
195 200 205

Met His Gly Val Lys Pro Phe Gln Gly Val Lys Asn Asn Asp Val Ile
 210 215 220

Gly Arg Ile Glu Asn Gly Glu Arg Leu Pro Met Pro Pro Asn Cys Pro
 225 230 235 240

Pro Thr Leu Tyr Ser Leu Met Thr Lys Cys Trp Ala Tyr Asp Pro Ser
 245 250 255

Arg Arg Pro Arg Phe Thr Glu Leu Lys Ala Gln Leu Ser Thr Ile Leu
 260 265 270

Glu Glu Glu Lys Ala Gln
 275

<210> 40

<211> 292

<212> PRT

<213> Homo sapiens

<400> 40

Pro Thr Glu Val Asp Pro Thr His Phe Glu Lys Arg Phe Leu Lys Arg
 1 5 10 15

Ile Arg Asp Leu Gly Glu Gly His Phe Gly Lys Val Glu Leu Cys Arg
 20 25 30

Tyr Asp Pro Glu Asp Asn Thr Gly Glu Gln Val Ala Val Lys Ser Leu
 35 40 45

Lys Pro Glu Ser Gly Gly Asn His Ile Ala Asp Leu Lys Lys Glu Ile
 50 55 60

Glu Ile Leu Arg Asn Leu Tyr His Glu Asn Ile Val Lys Tyr Lys Gly
 65 70 75 80

Ile Cys Thr Glu Asp Gly Gly Asn Gly Ile Lys Leu Ile Met Glu Phe
 85 90 95

Leu Pro Ser Gly Ser Leu Lys Glu Tyr Leu Pro Lys Asn Lys Asn Lys
 100 105 110

Ile Asn Leu Lys Gln Gln Leu Lys Tyr Ala Val Gln Ile Cys Lys Gly
 115 120 125

Met Asp Tyr Leu Gly Ser Arg Gln Tyr Val His Arg Asp Leu Ala Ala
 130 135 140

Arg Asn Val Leu Val Glu Ser Glu His Gln Val Lys Ile Gly Asp Phe
 145 150 155 160

Gly Leu Thr Lys Ala Ile Glu Thr Asp Lys Glu Tyr Tyr Thr Val Lys
 165 170 175

Asp Asp Arg Asp Ser Pro Val Phe Trp Tyr Ala Pro Glu Cys Leu Met
 180 185 190

Gln Ser Lys Phe Tyr Ile Ala Ser Asp Val Trp Ser Phe Gly Val Thr
195 200 205

Leu His Glu Leu Leu Thr Tyr Cys Asp Ser Asp Ser Ser Pro Met Ala
210 215 220

Leu Phe Leu Lys Met Ile Gly Pro Thr His Gly Gln Met Thr Val Thr
225 230 235 240

Arg Leu Val Asn Thr Leu Lys Glu Gly Lys Arg Leu Pro Cys Pro Pro
245 250 255

Asn Cys Pro Asp Glu Val Tyr Gln Leu Met Arg Lys Cys Trp Glu Phe
260 265 270

Gln Pro Ser Asn Arg Thr Ser Phe Gln Asn Leu Ile Glu Gly Phe Glu
275 280 285

Ala Leu Leu Lys
290

<210> 41

<211> 283

<212> PRT

<213> Homo sapiens

<400> 41

Pro Leu Gln Ser Leu Thr Cys Leu Ile Gly Glu Lys Asp Leu Arg Leu
1 5 10 15

Leu Glu Lys Leu Gly Asp Gly Ser Phe Gly Val Val Arg Arg Gly Glu
20 25 30

Trp Asp Ala Pro Ser Gly Lys Thr Val Ser Val Ala Val Lys Cys Leu
35 40 45

Lys Pro Asp Val Leu Ser Gln Pro Glu Ala Met Asp Asp Phe Ile Arg
50 55 60

Glu Val Asn Ala Met His Ser Leu Asp His Arg Asn Leu Ile Arg Leu
65 70 75 80

Tyr Gly Val Val Leu Thr Pro Pro Met Lys Met Val Thr Glu Leu Ala
85 90 95

Pro Leu Gly Ser Leu Leu Asp Arg Leu Arg Lys His Gln Gly His Phe
100 105 110

Leu Leu Gly Thr Leu Ser Arg Tyr Ala Val Gln Val Ala Glu Gly Met
115 120 125

Gly Tyr Leu Glu Ser Lys Arg Phe Ile His Arg Asp Leu Ala Ala Arg
130 135 140

Asn Leu Leu Leu Ala Thr Arg Asp Leu Val Lys Ile Gly Asp Phe Gly
145 150 155 160

Leu	Met	Arg	Ala	Leu	Pro	Gln	Asn	Asp	Asp	His	Tyr	Val	Met	Gln	Glu	165	170	175
His	Arg	Lys	Val	Pro	Phe	Ala	Trp	Cys	Ala	Pro	Glu	Ser	Leu	Lys	Thr	180	185	190
Arg	Thr	Phe	Ser	His	Ala	Ser	Asp	Thr	Trp	Met	Phe	Gly	Val	Thr	Leu	195	200	205
Trp	Glu	Met	Phe	Thr	Tyr	Gly	Gln	Glu	Pro	Trp	Ile	Gly	Leu	Asn	Gly	210	215	220
Ser	Gln	Ile	Leu	His	Lys	Ile	Asp	Lys	Glu	Gly	Glu	Arg	Leu	Pro	Arg	225	230	235
Pro	Glu	Asp	Cys	Pro	Gln	Asp	Ile	Tyr	Asn	Val	Met	Val	Gln	Cys	Trp	245	250	255
Ala	His	Lys	Pro	Glu	Asp	Arg	Pro	Thr	Phe	Val	Ala	Leu	Arg	Asp	Phe	260	265	270
Leu	Leu	Glu	Ala	Gln	Pro	Thr	Asp	Met	Arg	Ala						275	280	